

The Examiner has objected to the abstract. Applicant has submitted a corrected abstract.

The Examiner has objected to claim 1 because of the word "plastics." Applicant has substituted the word "plastic" therefor.

Claims 1-12 were rejected under 35 U.S.C. 112 for various reasons. Applicant has made appropriate corrections.

Claims 1-5 have been rejected on the basis of Bertling et al., U.S. Patent No. 3,269,754.

Bertling et al. discloses a plastic coupling 10 including an undulating coupling portion which forms an axial corrugation and presents a ridge 26. The ridge includes a series of annular serrations 28.

Applicant has amended claim 1 wherein it now calls for a molded plastic tubular coupling having a cylindrical surface with an annular, substantially V-shaped, recess formed therein and with a flexible annular diaphragm disposed in the recess. Applicant submits that Bertling et al. does not disclose such structure. Applicant therefore submits that claim 1 and claims 2-5 which depend therefrom distinguish patentably over Bertling et al. and are not obvious in view thereof.

Claims 6 and 7 have been rejected as unpatentable under 35 U.S.C. 103 in view of Bertling et al. and Yokomatsu et al., U.S. Patent No. 4,906,030. Yokomatsu et al. teaches a coupling 24 with a head 24a having a groove and an O-ring. Yokomatsu et al. does not correct the deficiencies of Bertling et al. Applicant therefore submits that claims 6 and 7 distinguish patentably over the cited prior patents and are not obvious in view thereof.

Claims 8-12 have been rejected as unpatentable over Bertling et al. in view of Dlouhy, U.S. Patent No. 5,096,233. Dlouhy teaches a plurality of diaphragms disposed on the universal standpipe adaptor. However, Dlouhy does not correct the deficiencies of the Bertling et al. reference. Applicant therefore respectfully submits that claims 8-12 distinguish over and are not obvious in view of a combination of Bertling et al. and Dlouhy.

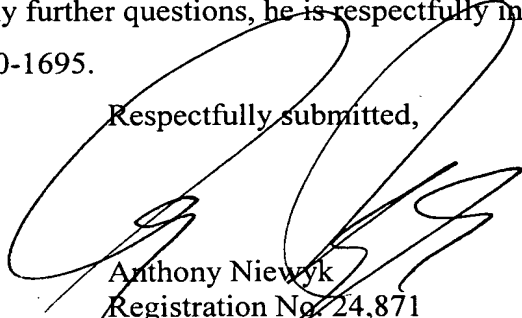
Applicant respectfully submits that the claims, as amended, are in condition for allowance and respectfully requests allowance thereof.

In the event Applicant has overlooked the need for an additional extension of time, payment of fee, or additional payment of fee, Applicant hereby petitions therefore and authorizes that any charges be made to Deposit Account No. 02-0385, Baker & Daniels.

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Should the Examiner have any further questions, he is respectfully invited to telephone the undersigned at 260-460-1695.

Respectfully submitted,



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Enclosures:

- Petition For Extension Of Time
- Check No. 108283
- Version With Markings To Show

Changes Made

- Postcard



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

Page 4, the first full paragraph has been amended as follows:

The head 12 of the sleeve provides a radially annular face 15 directed along the sleeve which forms an end stop to limit insertion of the sleeve [16] 11 into a tube end 16 by engagement with the end of the tube as shown in Figure 2.

IN THE CLAIMS:

Claims 1-12 have been amended as follows:

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1. (Amended) A [moulded plastics] molded plastic tubular coupling having a cylindrical surface to engage with a corresponding surface of another component, the cylindrical surface having an annular substantially V-shaped recess formed therein and a flexible annular diaphragm [formed] disposed in the recess integrally with the coupling at the apex of the recess and having an outer periphery extending [proud of] outwardly from the cylindrical surface to engage and grip the corresponding surface of said another component.

2. (Amended) A tubular coupling as claimed in claim 1, wherein [the annular recess in the cylindrical surface of the coupling is V-shaped and] the flexible diaphragm is [formed at the apex of the V to be] able to flex towards either side of the V when the coupling is engaged with said another component.

3. (Amended) A coupling as claimed in claim 1, wherein the recess and diaphragm are formed on the outer cylindrical surface of the coupling to engage an inner surface of a said another component to encircle the coupling.

4. (Amended) A coupling as claimed in claim 3, wherein the coupling is intended to receive an end of a length of tubing, wherein the coupling has a sleeve portion having said recess and diaphragm formed around the outer surface of [the] said sleeve portion partway along the sleeve[;] , and wherein said sleeve portion has a tapered portion at one end [of the

sleeve] to facilitate insertion of the sleeve into [an] a said end of a length of tubing and an end stop at the other end of [the] said sleeve to limit the insertion of [the] said sleeve into [the tube] said length of tubing.

5. (Amended) A coupling as claimed in claim 4, wherein the end stop comprises an annular head [formed] at said other end of the sleeve, said head projecting outwardly of the sleeve.

6. (Amended) A coupling as claimed in claim 5, wherein the head [is formed with] includes a means to [grip/seal] grip and seal with an encircling component in which the sleeve is engaged.

7. (Amended) A coupling as claimed in claim 6, wherein the head has an encircling groove [in which an O-ring or similar seal is mounted] and a sealing ring seated in said groove.

8. (Amended) A coupling as claimed in claim 6, wherein the outer surface of the head has an annular recess, [in which] a further flexible diaphragm is [formed integral with] disposed in the annular recess in the head and projecting [proud of] outwardly from the outer surface of the head to engage and lock the head in the bore of [a] an encircling component in which the coupling is located.

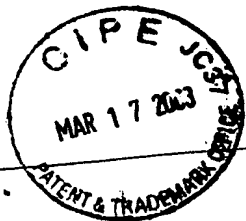
9. (Amended) A coupling as claimed in claim 1, wherein the coupling has a second encircling annular recess with a second flexible annular diaphragm [formed in the recess] disposed therein to engage and grip in another component.

10. (Amended) A coupling as claimed in claim 9, wherein the second recess is V-shaped and the second flexible annular diaphragm is formed in the apex of the V.

11. (Amended) A coupling as claimed in claim 9, wherein the second diaphragm projects marginally above [the first] said flexible annular diaphragm to provide a gripping function, [the first] said flexible annular diaphragm providing a sealing function with [a] said

another component in which the coupling is engaged.

12. (Amended) A coupling as claimed in claim 9 and in the case where the coupling has a head at one end, wherein the second annular recess is formed between the [first] V-shaped recess and the head.



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ABSTRACT

A2 A molded plastic tubular coupling including a plastic sleeve having an integral head at one end. The sleeve provides a cylindrical outer surface to engage in a corresponding bore of another component. The cylindrical outer surface has an encircling annular recess and an integral radially extending flexible annular diaphragm formed in the recess. The diaphragm has an outer periphery extending outwardly from the cylindrical surface to engage and grip the corresponding surface of another component.

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